

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026055**Date Inspected:** 13-Aug-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	Pat Swain and Steve Mc Connell			CWI Present:	Yes	No	
Inspected CWI report:	Yes	No	N/A	Rod Oven in Use:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A	Weld Procedures Followed:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A	Verified Joint Fit-up:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A	Approved WPS:	Yes	No	N/A
				Delayed / Cancelled:	Yes	No	N/A
Bridge No:	34-0006			Component:	SAS Tower		

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At Tower Base Elevation 13Meters, Electro Slag Welding (ESW) T-joint W-041 location 'W', QA randomly observed ABF/JV qualified welder Fred Kaddu perform CJP groove welding repair on the top of the welded ESW due to ABF QC noted linear indications that propagated into the Tower skin plate. ABF welder had previously carbon air arc and ground removed the indications then tested by QC John Pagliero using Magnetic Particle Testing (MT) with affirmative result. The removal was verified by this QA and obtained same result. The top of the ESW weld joint is being repaired with approval through Repair Welding Request (RWR) # 201108-009. The welder was observed welding in the 2G (horizontal) position utilizing Shielded Metal Arc Welding (SMAW) with 5/32" diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1000-Repairs. The weld repair was preheated to more than 300 degree Fahrenheit using propylene gas torch prior welding. During the shift, ABF QC Pat Swain was noted monitoring the welder. Measured welding parameter during welding was 180 amperes on a 5/32" diameter E7018H4R electrode. Before the end of the shift, 2G SMAW repair welding was completed and the welder has carbon air arc gouged the run off tab he used and smooth ground after.

At Tower Base Elevation 13Meters, Electro Slag Welding (ESW) T-joint N-045 location 'E', QA randomly ABF welder Jorge Lopez perform 3G SMAW second time welding repair (R2) on the Ultrasonic Testing (UT) detected defect on the vertical weld of the ESW. The welder was observed welding in the 3G (vertical) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode implementing welding procedure

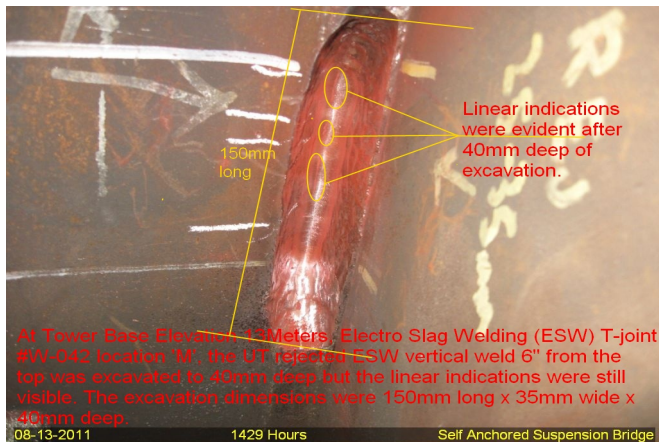
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ABF-WPS-D15-1000-Repairs. The boat shape repair was excavated on the other side of the joint and was having dimensions of 100mm long x 30mm wide x 25mm deep. The repair excavation and the adjacent base metal was preheated to more than 300°F using propylene gas torch prior welding. During the shift, ABF QC Pat Swain was noted monitoring the welder. Measured welding parameter during welding was 125 amperes on a 1/8" diameter E7018H4R electrode. At the end of the shift, 3G repair welding was completed including grinding/cleaning of the weld cover.

After the welding completion of the second time repair mentioned above, the welder has moved to another ESW T-joint W-042 location 'M' where he performed excavation of the UT detected defect on the top 8" to 13" of the vertical weld. The welder was noted using carbon air arc gouging on the defect removal and after gouging the welder smooth ground the groove of the repair excavation. The welder has already excavated the repair to 150mm long x 35mm wide x 40mm deep when ABF QC Pat Swain has performed Magnetic Particle Testing (MT) and the linear defect was still evident. At this point, ABF QC has instructed the welder to stop excavating until ABF gets approval to continue from the Engineer.

At Tower Base Elevation 13Meters outer West shear plate, ABF foreman Rory Hogan informed this QA and ABF QC Steve Mc Connell that the bevel preparation was completed. ABF QC Steve Mc Connell performed a visual test (VT) and measured the bevel angle and depth of the completed bevel prep. Mr. Mc Connell informed this QA that the cut surface of the bevel was smooth, the measured bevel angle was 45 degree and the depth was more than 40mm as required. According to QC, the bevel prep was deemed acceptable to contract requirements. This QA performed the verification and noted the same results.



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At Tower Base Elevation 13Meters, Electro Slag Welding (ESW) T-joint #N-045 location 'E', ABF welder Jorge Lopez was noted preheating the excavation and adjacent base metal to more than 300 degrees Fahrenheit prior the 2nd time welding repair.



At Tower Base Elevation 13Meters, Electro Slag Welding (ESW) T-joint #W-041 location 'W', ABF welder Fred Kaddu was observed performing 2G Shielded Metal Arc Welding (SMAW) welding repair.



Summary of Conversations:

No significant conversation occurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer